

REMARKS

Claims 1-16 and 19 are pending.

Claims 1-16 and 19 stand rejected.

Claims 17, 18, 20 and 21 were previously cancelled.

Claims 22-25 are new.

Claim Rejections – 35 USC §102

Claims 1-6, 9-13, 15, 16 and 19 stand rejected under 35 USC 102(b) according to U.S. Patent No. 5,130,830 to Fukushima et al (“Fukushima”)

The rejection is respectively traversed, however claims 1-6, 9-13, 15, 16 and 19 have been amended to further clarify the subject matter of the invention in order to facilitate bringing this case into allowance. For example, claim 1 has been amended to recite

A method of controlling the switching of an optically addressable spatial light modulator (OASLM) having a photosensitive layer able to be driven in both a photosensitive direction and non-photosensitive direction, comprising:
applying a bipolar switching waveform to control electrodes of the OASLM during a write cycle such that a leading pulse of the waveform applies a voltage across the OASLM which is in the photosensitive direction and a trailing pulse applies a voltage which is not in the photosensitive direction, wherein the trailing pulse causes switching between stable states of the OASLM.

In rejecting claim 1, the Examiner identified a ferroelectric liquid crystal (FLC) 14 of Fukushima that is polarized (col. 5, lines 41-45), however claim 1 recites a photosensitive layer able to be driven in both a photosensitive direction and non-photosensitive direction. To the contrary, the photoconductive layer 12 of Fukushima is expressly identified as being non-polar (col. 3, lines 21-25), which implies that it is not able to be driven in a photosensitive direction. Fukushima discloses reversing the positive and negative states of the polarized control pulses (FIG. 8, col. 6 lines 19-23 and col. 7, lines 29-34) which would not function if the photoconductive layer 12 were polarized.

The Examiner further identified the –V portion of FIG.8A to disclose the leading pulse, and the +V portion to disclose the trailing pulse of claim 1 (page 3, lines 1-4 of the 1/29/07 Office Action). Amended claim 1 recites wherein the trailing pulse causes switching between stable states of the OASLM. As stated at col. 7, lines 16-21 of Fukushima, the FLC 14 switches states when the –V portion, or leading pulse, is applied; not the trailing pulse.

Dependent claims 2-5 include further novel features not disclosed by Fukushima. For example, amended claim 2 recites wherein the amplitude of the leading pulse is less than that of the trailing pulse. The -V leading portion of Fukushima shown in FIGS. 8, 9, 20A, 23A includes an amplitude that is equal to or greater than the amplitude of the +V trailing pulse.

Claim 3 recites wherein the shape and amplitude of the bipolar switching waveform are such that the leading pulse causes substantially no switching between stable states. As noted above, the -V portion, or leading pulse, of Fukushima causes the FLC 14 to switch states. Therefore, Fukushima fails to disclose each of the features recited by claims 1-5.

Claim 6 has been amended to recite, in part, a method comprising:

- applying a blanking pulse in the photosensitive direction to cause the OASLM to switch to a first state;

- applying a bipolar switching waveform to control electrodes of the OASLM during each write cycle, wherein a leading pulse of the switching waveform is also applied in the photosensitive direction, and wherein a trailing pulse of the bipolar waveform is applied in the non-photosensitive direction and causes areas of the OASLM to substantially switch from the first state to an opposite state.

As shown in FIG. 8 of Fukushima, the erase light (B) pulse is oriented in the same direction as the +V, or trailing portion of the pulse (A). Therefore, Fukushima fails to disclose a blanking pulse and a leading pulse both applied in the photosensitive direction. In addition, claim 6 recites an OASLM having a photosensitive layer able to be driven in both a photosensitive direction and a non-photosensitive direction. As previously discussed with respect to claim 1, Fukushima does not include such a photosensitive layer.

Claims 7-11 include further novel features not disclosed by Fukushima. For example, claim 11 recites wherein the blanking pulse is completed prior to the leading pulse. As shown in FIG. 8 and further described at col. 7, lines 16-21 of Fukushima, the erase light (b) is coincident with the -V portion of the pulse (A). Therefore, Fukushima fails to disclose each of the features recited by claims 6-11.

Amended claims 12-19 include some of the features recited in claims 1-11 and are allowable for the same or similar reasons as discussed above, in addition to the further novel features which are recited therein.

Claim Rejections – 35 USC §103

Claim 7, 8 and 14 stand rejected over Fukushima. Specifically, the Examiner has indicated that the pulse amplitudes and widths are disclosed by the simple passage in

Fukushima found at col. 3 lines 6-8 that "a pulse width and a voltage of the applied control pulse are variable."

Applicant traverses this rejection on the grounds that this brief comment does not teach, suggest or otherwise disclose to one skilled in the art the amplitudes and widths recited by Applicant's claims. Claims 7 and 8 depend on claim 6, and therefore the pulse amplitude and widths recited therein pertain to the embodiment recited by claim 6 which is distinguishable from the method disclosed by Fukushima. One skilled in the art would not be able to ascertain or appreciate the advantages of providing the regions or ratio recited by claims 7, 8 and 14 according to the disclosure of Fukushima and the comment at col. 3, lines 6-8, and without knowledge of the embodiment recited by claims 6 or 12. Applicant respectfully submits that the Examiner has failed to provide sufficient substantive basis for the rejection of claims 7, 8 and 14.

Any statements made by Examiner that are not addressed by Applicant do not necessarily constitute agreement by the Applicant. In some cases Applicant may have amended or argued the allowability of independent claims thereby obviating grounds for rejection of the dependent claims.

For the foregoing reasons, reconsideration and allowance of claims 1-16, 19 and 22-25 of the application as amended is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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A handwritten signature in cursive script, reading "Bryan Kirkpatrick", is written over a horizontal line.

Bryan D. Kirkpatrick

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